REMARKS

This application has been reviewed in light of the Office Action dated October 6, 2005. Claims 1-16 are presented for examination. Claims 1-3 have been amended to define more clearly what Applicant regards as the invention. Claims 12-14 have been amended for consistency with Claim 1. Claim 15 has been amended to attend to a formal matter, in a manner that is not believed to affect the scope of that claim. Claims 1-3 and 15 are in independent form. Favorable reconsideration is requested.

The specification has been amended to attend to minor matters of form. No new matter has been added.

Applicant again acknowledges with appreciation the allowance of Claims 15 and 16 and the indication that Claims 4-7, 9, and 11-14 would be allowable if rewritten in independent form. The latter claims have not been so rewritten, because, for the reasons given below, their base claim is believed to be allowable.

Claims 1-3 and 10 were rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent Application Publication No. 2005/0005692 ("Giustino") in view of U.S. Patent Appln. No. 2004/0036590 ("Elsner"). Claim 8 was rejected as obvious over Giustino in view of Elsner and U.S. Patent No. 6,763,288 ("Caretta").

Generally speaking, the invention allows various tire characteristics to be determined based on measurements of the circumferential extension or contraction between certain fixed points on the sidewall of the tire. The distance between the fixed points (e.g., points A_1 and A_2, as shown in Fig. 1) changes as the tire rotates through the contact zone (see, e.g., Fig. 2a), due to the various forces operating on the tire, such as the weight of the vehicle. Measurements are made at particular azimuth positions of the tire (e.g., on either

side of the contact zone, which is defined as the 180° azimuth position). The forces operating on the tire are determined by analysis of these measurements.

Giustino measures sidewall torsion, rather than circumferential extension or contraction, by detecting the passing of radially-oriented patches using two external sensors that are at the same azimuth, but different radial distances. The measurement is based on the difference between the detection made by the inner sensor relative to the outer sensor (i.e., at the same azimuth, but different radii). While Giustino suggests that a second sensor or set of sensors may be provided at an additional azimuth location (see, e.g., para. 51), such sensors similarly are used to measure torsion by determining a difference between detections in an outer radius with respect to detections in an inner radius, e.g., between a single outer sensor at the 90° or 270° position and the inner sensor at the 180° position (see para. 51).

Thus, Giustino, as acknowledged in the Office Action, does not teach or suggest obtaining at least two measurements of circumferential extension or contraction between a pair of fixed points positioned at a same radius and being separated in azimuth in at least one sidewall of the tire, as recited in Claim 1. Nor does Giustino teach or suggest making the at least two measurements at two predetermined azimuth positions of the tire that are separated in azimuth from the center of the contact area and calculating the characteristic from the at least two measurements, as further recited in Claim 1.

Elsner relates to a system of sensors that are circumferentially distributed around the sidewall of a tire (abstract). The sensors measure the deformation of the profile of the tire near the contact surface between the tire and the road (para. 43). Each sensor is sensitive to a force or acceleration in one dimension (para. 51). A directional antenna is

positioned in the axle of the wheel and pointed toward the contact region to pick up signals from the sensors (para. 44).

It is respectfully submitted that Elsner does not remedy the shortcomings of Giustino with respect to Claim 1. For example, Elsner does not teach or suggest, *inter alia*, making at least two measurements at two predetermined azimuth positions of the tire that are separated in azimuth from the center of the contact area and calculating the characteristic from the at least two measurements, as recited in Claim 1. To the contrary, Elsner relies on a single measurement made at the center of the contact area. Moreover, Elsner teaches away from making measurements that are separated in azimuth from the contact area (para. 73):

> At the edge of the region 32, there is a strong flexing motion on the part of the material comprising the pneumatic tire 30, and as a result the sensors of groups a and c can be subjected to powerful forces. The sensor of group d, conversely, must be located in the middle of the flattened region 32, i.e. at the place where the flexing motion is only slight, yet the transmission of force between the pneumatic tire 30 and the roadway is most effective. The answering radio signal furnished by this sensor thus makes it possible to draw the precisest possible conclusion about the quality of road adhesion of the pneumatic tire. The polling unit therefore identifies the answering radio signal of the sensor of group d from its characteristic measurement frequency and for instance causes a warning signal to be output to the vehicle driver if the instantaneous value of this measurement frequency, which represents the force detected by the sensor in group d, departs from a desired range.

Accordingly, Claim 1 is believed to be patentable over the combination of Giustino and Elsner.

Independent Claims 2 and 3 recite features similar to those discussed above with respect to Claim 1 and therefore are also believed to be patentable over the combina-

tion of Giustino and Elsner for the reasons discussed above. In addition, these claims have been amended to more clearly recite that measurements are performed in both sidewalls. This arrangement is particularly advantageous in the case in which a camber angle is applied to the tire, as discussed in the specification, for example, at paragraph 33 (see Fig. 5). Nothing has been found or pointed out in the prior art that teaches or suggests making measurements in both sidewalls, in the manner recited in Claims 2 and 3.

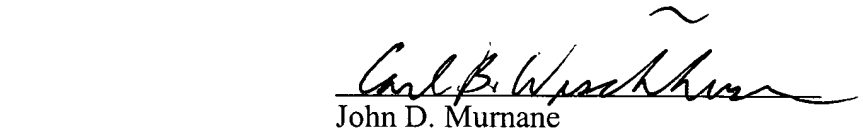
A review of the other art of record, including Caretta, has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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